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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/820,027 | 04/08/2004 | Masahiko Kamiya | 14-031 | 7576 |

23400 7590 12/15/2004

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RESTON, VA 20190

EXAMINER

SCHWARTZ, CHRISTOPHER P

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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3683

DATE MAILED: 12/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/820,027

Applicant(s)

KAMIYA ET AL.

Examiner

Christopher P. Schwartz

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[Signature]

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-52)
- 6) ☐ Other: _____.

CHRISTOPHER P. SCHWARTZ
PRIMARY EXAMINER

DETAILED ACTION

1. Applicant's amendment filed 9/30/04 has been received and considered. Claims 1-8 have not been amended. Claims 9-17 have now been added.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese publication JP 9221013 ('013) in view of Sano.

Regarding claims 1,4,13 '013 discloses a vehicle brake system with noise detection capability, with the noise detection sensor located on the front wheels. Note the ECU at 50. Upon the detection of noise on the front wheels '013 reduces hydraulic

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pressures in the front wheel cylinders and increases the braking force at the rear wheels to control the brake noise levels.

'013 lacks a specific discussion of reducing or increasing pressures in the wheels upon noise detection in the front and rear wheels, but in a diagonal arrangement.

Sano discusses increasing and/or decreasing the target pressures in the diagonally arranged front and rear wheels to control the stability of the vehicle when it enters a turn or to control the yaw rate of the vehicle.

The examiner presumes that the "noise" generated by a wheel can occur when the wheel locks up or begins to skid upon excessive braking.

One having ordinary skill in the art at the time of the invention would have found it obvious to have further modified the device of '013 to include noise detection signal sensors on the front and rear wheels and to control the target braking pressures on the diagonally arranged wheels to increase the vehicles cornering ability or to offer more stability to the vehicle when it enters a turn, as suggested by Sano. Further, to "select" the wheel where the noise is most "remarkable" i.e. the one subject to the most spinning or skidding would have been an obvious expedient to the skilled worker in the art to provide the best cornering stability when the vehicle enters a turn. The limitations of the remaining claims are considered to be met by the combined teachings of the references above as it is known to control the braking pressures on specific wheels dependent upon the specific stability performance from the vehicle desired.

Regarding claims 9,10,16 as broadly claimed, these requirements are considered to be met since once the braking force is either reduced or increased to prevent the

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wheel(s) from locking up or spinning during the notoriously well known stability control routine (see element 23 in Sano figure 2-- i.e. to control the noise level of the wheel(s)) a resonance mode of the friction member is inherently changed.

Response to Arguments

5. Applicant's arguments filed 9/30/04 have been fully considered but they are not persuasive. Further, from page 8 of the remarks last two full paragraphs, applicant's arguments here are not exactly clear as they appear to argue exactly what the reference to Sano suggests—that the braking force on the front and rear wheels can be controlled i.e. reduced or increased in a diagonal arrangement when the vehicle enters a turn. The pressures of the other wheels may be similarly controlled when the vehicle is simultaneously cornering and in ABS control. As broadly claimed in the independent claims the limitations are considered to be met by JP '013 in view of Sano.

Regarding the dependent claims the examiner maintains that one having ordinary skill in the art would have found it obvious to have modified the Japanese reference '013, as outlined in the action above, from the teachings of Sano.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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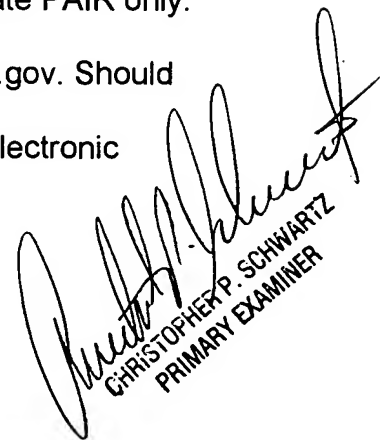
shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher P. Schwartz whose telephone number is 703-308-0576. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Bucci can be reached on 703-308-3668. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Cps
12/11/04



CHRISTOPHER P. SCHWARTZ
PRIMARY EXAMINER